



**[Billing Code 4140-01-P]**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**Government-Owned Inventions; Availability for Licensing**

**AGENCY:** National Institutes of Health

**ACTION:** Notice

**SUMMARY:** The inventions listed below are owned by an agency of the U.S.

Government and are available for licensing in the U.S.

**FOR FURTHER INFORMATION CONTACT:** Licensing information and copies of the patent applications listed below may be obtained by emailing the indicated licensing contact at the National Heart, Lung, and Blood, Office of Technology Transfer and Development Office of Technology Transfer, 31 Center Drive Room 4A29, MSC2479, Bethesda, MD 20892-2479; telephone: 301-402-5579. A signed Confidential Disclosure Agreement may be required to receive copies of the patent applications.

**SUPPLEMENTARY INFORMATION:** This notice is in accordance with 35 U.S.C. 209 and 37 CFR Part 404 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing. A description of the technology follows.

**Derivatives of Docosahexaenoylethanolamide (DEA) for Neurogenesis**

The invention pertains to derivatives of docosahexaenoylethanolamide (synaptamide or DEA) and their use in inducing neurogenesis, neurite growth, and/or synaptogenesis. As such, these DEA derivatives can be used as therapeutics for neurodegenerative diseases

such as traumatic brain injury, spinal cord injury, peripheral nerve injury, stroke, multiple sclerosis, autism, Alzheimer's disease, Huntington's disease, Parkinson's disease, amyotrophic lateral sclerosis. The DEA derivatives of the invention have increased potency and hydrolysis resistance as compared to native DEA. Docosahexaenoic acid (DHA), an n-3 polyunsaturated fatty acid accumulates in the brain during development, and has been implicated in learning and memory development. DEA, a metabolite derived from DHA, also has been shown to accelerate neuronal growth and development. In vitro studies in which neural progenitor cells were treated with DEA derivatives showed an increase in the number of somatic neurons produced after differentiation.

**Potential Commercial Applications:**

- Neurogenesis,
- Neurite growth,
- Synaptogenesis,
- Therapeutics for traumatic brain injury, spinal cord injury, peripheral nerve injury, stroke, multiple sclerosis, autism, Alzheimer's disease, Huntington's disease, Parkinson's disease, and amyotrophic lateral sclerosis.

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**Intellectual Property:**

HHS Reference No. E-070-2012/0, U.S. Provisional Patent Application 61/624,741 filed April 16, 2012 (expired), International Patent Application PCT/US2013/032333 filed March 15, 2013 (expired), U.S. Patent 9,422,308; German Patent 602013016154.2, French Patent 2847178, and UK Patent 2847178.

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